

Notice of Allowability

Application No.

10/692,917

Examiner

Callie E. Shosho

Applicant(s)

ZHU ET AL.

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 8/8/06.
2. ☒ The allowed claim(s) is/are 1-12 and 14-26.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Statement of Reasons for Allowance

1. The present claims are allowable over the “closest” prior art Hosoi et al. (2003/0227531), Doi (U.S. 6,988,795), Zhu et al. ‘933 (U.S. 6,221,933), and Zhu et al. ‘495 (U.S. 2004/0154495), for the following reasons:

Hosoi et al. disclose ink jet ink comprising water, opaque pigment, acidic resin, polyethyleneimine, solvent, and conductivity agent. However, while Hosoi et al. broadly disclose the use of conductivity agent, there is no disclosure of hydrophobic conductive agent and no disclosure or suggestion of hydrophobic conductive agent that comprises a cation selected from the group consisting of tetraalkylammonium, tetraarylammonium, tetraalkylphosphonium, tetraarylphosphonium and any combinations thereof and an anion that is selected from the group consisting of hexafluorophosphate, tetrafluoroborate, tetraalkylborate, tetraarylborate, and any combinations thereof as now required in all the present claims.

In order to meet the limitations in the claims regarding the hydrophobic conductive agent, Hosoi et al. was combined with Doi that discloses ink jet ink comprising hydrophobic compound such as calcium hydroxide that is used in order to adjust the conductivity. However, there is no disclosure or suggestion in Doi of hydrophobic conductive agent that comprises a cation selected from the group consisting of tetraalkylammonium, tetraarylammonium, tetraalkylphosphonium, tetraarylphosphonium and any combinations thereof and an anion that is selected from the group consisting of hexafluorophosphate, tetrafluoroborate, tetraalkylborate, tetraarylborate, and any combinations thereof as now required in all the present claims.

Zhu et al. ‘933 disclose ink jet ink comprising organic solvent, polyamine, opaque pigment, and acidic resin. However, while Zhu et al. ‘933 disclose that the ink may further

comprise electrolyte to adjust its conductivity, there is no disclosure or suggestion of hydrophobic conductive agent and no disclosure or suggestion of hydrophobic conductive agent that comprises a cation selected from the group consisting of tetraalkylammonium, tetraarylammonium, tetraalkylphosphonium, tetraarylphosphonium and any combinations thereof and an anion that is selected from the group consisting of hexafluorophosphate, tetrafluoroborate, tetraalkylborate, tetraarylborate, and any combinations thereof as now required in all the present claims.

In order to meet the limitations in the claims regarding the hydrophobic conductive agent, Hosoi et al. and Zhu et al. '933 were each combined with Zhu et al. '495 that discloses ink jet ink comprising less than 5% hydrophobic conductivity agent such as tetrabutylammonium hexafluorophosphate. However, there is no disclosure in Zhu et al. '495 of polyamine as required in all the present claims.

Further, as set forth in amended 35 USC 103(c), subject matter which qualifies as prior art under one or more subsections (e), (f), and (g) of section 102 cannot be applied against the claimed invention if the prior art and the claimed invention "were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person." This rule change to 103(c) applies to any patent application filed on or after November 29, 1999. See Official Gazette, April 11, 2000. As noted in the Official Gazette, the "mere filing of a continuation application on or after November 29, 1999 will serve to exclude commonly owned 102(e) prior art that was applied, or could have been applied, in a rejection under 103 in the parent application."

Given that the filing date of the present application is subsequent to November 29, 1999, that Zhu et al. '495 qualifies as prior art under 102(e), and that applicants have established that the present application and Zhu et al. '495 were, at the time the present invention was made, commonly owned, Zhu et al. '495 is disqualified as prior art against the present claims.

In light of the above, it is clear that the rejections of record are untenable and so, the present claims are passed to issue.

Upon updating the searches, a new reference came to the attention of the examiner, namely, Kozee et al. (U.S. 2004/0220298). The present claims are allowable over Kozee et al. for the following reasons:

Kozee et al. disclose ink jet ink comprising organic solvent, opaque pigment, and 0.1-5% conductivity agent. However, there is no disclosure in Kozee et al. of acidic resin and polyamine as required in all the present claims. Further, Kozee et al. disclose that the conductivity agent is utilized in inks used in continuous ink jet printing. However, there is no disclosure in Hosoi et al. or Zhu et al. '933 of ink for continuous ink jet printing, and thus, no motivation to combine Hosoi et al. or Zhu et al. '933 with Kozee et al. Further, while Kozee et al. disclose the use of conductivity agent, there is no disclosure of the specific type of conductivity agent utilized with the exception of the examples that disclose conductivity agents including tetrapropylammonium bromide that is outside the scope of the present claims. While Kozee et al. do disclose example of ink that comprises tetrabutylammonium hexafluorophosphate, there is no disclosure that this ink comprises polyamine and acidic resin as required in all the present claims. Further, the ink of

this example is drawn to ink that changes color when irradiated with light. Given that there is no disclosure in Zhu et al. '933 or Hosoi et al. of ink irradiated with light, there is no motivation to combine Hosoi et al. or Zhu et al. '933 with Kozee et al.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
8/22/06